Applicants: Sprecher et al. Serial No.: 10/800,057 Filed: March 12, 2004

For: NOVEL HUMAN KUNITZ-TYPE INHIBITORS AND METHODS RELATING THERETO

In the Claims

Please add claims 12-22.

Per 37 C.F.R. §1.121, the current status of all the claims in the present application is presented below.

Claim 1 (original): An isolated human Kunitz-type inhibitor that inhibits blood coagulation in a mammal and wherein DNA sequence encoding the human Kunitz-type inhibitor hybridizes to nucleotides 138-305 of SEQ ID NO:1 under highly stringent hybridization conditions.

Claim 2 (original): The isolated human Kunitz-type inhibitor of claim 1 wherein any differences between the human Kunitz-type inhibitor and amino acid number 34 to amino acid number 89 of SEQ ID NO:2 are due to conservative amino acid substitutions.

Claim 3 (original): A pharmaceutical composition comprising the human Kunitz-type inhibitor of claim 1.

Claim 4 (original): The pharmaceutical composition of claim 3 wherein the human Kunitz-type inhibitor is isolated from *E. coli*.

Claim 5 (original): A DNA construct comprising a first DNA segment, wherein the first DNA segment is the DNA sequence of claim 1, operably linked to additional DNA segments required for the expression of the first DNA segment.

Claim 6 (original): A host cell comprising the DNA construct of claim 5 wherein the host cell expresses the human Kunitz-type inhibitor encoded by the first DNA segment.

Claim 7 (original): The host cell of claim 6 wherein the host cell is E. coli.

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Claim 8 (original): A method for producing human Kunitz-type inhibitor comprising:

culturing a cell according to claim 6; and isolating the human Kunitz-type inhibitor produced by the cell.

Claim 9 (original): The method of claim 8 wherein the cell is *E. coli*.

Claim 10 (original): An isolated DNA sequence that hybridizes to nucleotides 138-305 SEQ ID NO:1 under highly stringent hybridization conditions, wherein the isolated DNA sequence encodes a human Kunitz-type inhibitor that inhibits blood coagulation in a mammal.

Claim 11 (original): The isolated DNA sequence of claim 10 wherein any differences between the encoded human Kunitz-type inhibitor and amino acid number 34 to amino acid number 89 of SEQ ID NO:2 are due to conservative amino acid substitutions.

Claim 12 (new): An isolated human Kunitz-type inhibitor that inhibits blood coagulation in a mammal and wherein DNA sequence encoding the human Kunitz-type inhibitor hybridizes to nucleotides 39-743 of SEQ ID NO:1 under highly stringent hybridization conditions.

Claim 13 (new): The isolated human Kunitz-type inhibitor of claim 12 wherein any differences between the human Kunitz-type inhibitor and amino acid number 1 to amino acid number 235 of SEQ ID NO:2 are due to conservative amino acid substitutions.

Claim 14 (new): A pharmaceutical composition comprising the human Kunitz-type inhibitor of claim 12.

Claim 15 (new): The pharmaceutical composition of claim 14 wherein the human Kunitz-type inhibitor is isolated from *E. coli*.

Preliminary Amendment

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Claim 16 (new): A DNA construct comprising a first DNA segment, wherein the first DNA segment is the DNA sequence of claim 12, operably linked to additional DNA segments required for the expression of the first DNA segment.

Claim 17 (new): A host cell comprising the DNA construct of claim 16 wherein the host cell expresses the human Kunitz-type inhibitor encoded by the first DNA segment.

Claim 18 (new): The host cell of claim 17 wherein the host cell is *E. coli*.

Claim 19 (new): A method for producing human Kunitz-type inhibitor comprising:

culturing a cell according to claim 17; and isolating the human Kunitz-type inhibitor produced by the cell.

Claim 20 (new): The method of claim 19 wherein the cell is E. coli.

Claim 21 (new): An isolated DNA sequence that hybridizes to nucleotides 39-743 SEQ ID NO:1 under highly stringent hybridization conditions; wherein the isolated DNA sequence encodes a human Kunitz-type inhibitor that inhibits blood coagulation in a mammal.

Claim 22 (new): The isolated DNA sequence of claim 21 wherein any differences between the encoded human Kunitz-type inhibitor and amino acid number 1 to amino acid number 235 of SEQ ID NO:2 are due to conservative amino acid substitutions.